

examining data in the Generalized Tables. On the other hand, *for facility analyses at the conceptual planning level, LOS should be determined based upon examination of averages weighted by segment length.* The primary exception to this rule lies in the treatment of the effective green ratio (how much time, relative to the entire cycle length, may be used for movement in a particular direction at a traffic signal) along arterials. Because a single g/C ratio must be selected for an entire facility, FDOT uses a “weighting” system which gives the effective green ratio at the critical intersection equal effect on the overall g/C ratio’s along the corridor. This is achieved by averaging the critical intersection’s g/C with the average of all the other signalized intersections along the arterial to arrive at an overall ‘weighted average’.

When using the Generalized Tables and/or LOSPLAN, the planner should remember the following two assumptions which were made in developing these tools: 1) mainline non-through movements are adequately accommodated, and 2) all roadway, traffic, and control variables are capacity adjustments, not free flow speed adjustments. The first assumption is of great significance because of the high degree to which it simplifies calculations using many of the input variables for LOS determination. Although it may seem that such a simplification is detrimental to the quality of the analyses, this assumption is necessary at the current time to generate meaningful data for LOS calculations. The second assumption is of lesser importance and is utilized primarily for consistency with general traffic engineering practice and the 2000 HCM calculation processes.

Logically, the most significant aspect of the FDOT Q/LOS Handbook is the description and relative importance of the specific input variables that are used in both the Generalized Tables and LOSPLAN. As does the 2000 HCM, FDOT divides the input variables into three categories: roadway variables, traffic variables, and control (signalization) variables.

Roadway variables deal specifically with physical characteristics of the roadway itself, which may influence user perception of travel quality. Area type refers to whether the roadway is located in an urban area, rural area, or a transitional area (between urban and rural). Number of through lanes is calculated in different places for different types of roadways and certain factors such as add/drop lanes must be taken into consideration when determining an appropriate value for this variable. Roadway class refers to whether the roadway may be considered an arterial, freeway, or other uninterrupted flow facility (e.g., two-lane highway, multilane highway), and must be the first variable determined when preparing to use LOSPLAN. Posted speed is the posted speed limit. Free flow speed is generally considered to be the posted speed plus five miles per hour, although LOSPLAN users may alter this value when appropriate. Roadway length is self-explanatory, although certain general minimum required lengths are suggested for analysis of each roadway type. Left-turn lanes must be classified as either exclusive or shared for analysis purposes. Terrain refers to whether the terrain around the segment is level or rolling, with rolling being considered as a terrain that causes heavy vehicles to reduce their speed below that of passenger cars. Percent no-passing zones is a variable that affects only two-lane highways. Passing lanes refers to whether or not a passing lane